

Appl. No. 09/173,134
Final Rejection dated June 2, 2004



UNITED STATES PATENT & TRADEMARK OFFICE

Application No. : 09/173,134
Title : MULTIPURPOSE RAT CAGE
Applicant : George S. Gabriel, *et al.*
Filed : October 15, 1998
TC/AU : 3643
Examiner : Son T. Nguyen
Docket No. : 364106/0176

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

BRIEF ON APPEAL

Sir:

Applicant submits this Brief on Appeal (in triplicate) in response to the Final Rejection of June 2, 2004. The filing of this Brief on Appeal is timely as the due date with payment of appropriate extension fees under 37 C.F.R. 1.136(a) is April 2, 2005. A request for a five month extension of time has been submitted herewith. A Request for Oral Hearing is also submitted herewith. Accordingly, the Commissioner is hereby authorized to charge the Large Entity Appeal Fee of \$500.00 for filing of this Appeal Brief, and any further fees or deficiencies in fees, to Deposit Account No. 19-4709.

Certificate of Mailing (37 C.F.R. 1.8)

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Jeong Eun Lee

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This Appeal is being taken in response to the Final Rejection, dated June 2, 2004, in which the Examiner finally rejected claims 1-3, 8 and 9, all of the claims currently pending in the subject Application. A Notice of Appeal was filed on September 2, 2004.

I. **REAL PARTY IN INTEREST**

Lab Products, Inc.
742 Sussex Road
Seaford, DE 19973

This application has been assigned to Lab Products, Inc. by Assignment recorded at Reel 9730 Frame 0076.

II. **RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to appellants, or their legal representatives which would directly affect or be directly affected by or have a bearing on the Board's decision in the present appeal.

III. **REQUEST FOR ORAL HEARING**

An oral hearing is hereby requested.

IV. **STATUS OF THE CLAIMS**

By the outstanding Final Rejection, claims 1-3, 8 and 9, all of the claims currently pending in the subject Application, stand finally rejected.

Claims 4-7 were cancelled without prejudice.

V. STATUS OF THE AMENDMENTS

In the Final Rejection, dated June 2, 2004, the Examiner finally rejected claims 1-3, 8 and 9, all of the claims currently pending in the subject Application. No Amendment after Final has been filed. The Final Rejection was issued in response to a Response filed by Applicant on February 26, 2004.

VI. SUMMARY OF THE INVENTION

The present invention as set forth, for example, in independent claim 1, presents a novel cage suitable for housing one or more of a variety of animals. Applicants discovered that it was desirable to provide one standardized cage that is suitable for housing a variety of animals without deviating from the ILAR guidelines, and further discovered that the feat can be accomplished by providing a cage having a floor area ("footprint") between 80 and 110 square inches. The most preferred footprint, as described in claim 2, is about 80 square inches. By providing a cage having a footprint within the claimed range, the invention allows for a standardized cage size that maximizes the efficiency in which the laboratory space, or other area in which animals are kept, is used, as well as provide a cost effective way of maintaining a laboratory.

For example, by providing a standardized cage having a footprint that is within the claimed range, the sizes of all racks can also be standardized, thereby substantially eliminating the need for different sized racks for different size animals. Instead, a standardized rack can be used to house either one type of animal or a variety of animals, according to the laboratory's choice and need. An example of such a standardized rack is described in independent claim 8, which is directed to a cage and rack system comprising a double sided rack suitable for housing cages having footprints between 80 and 110 square inches.

In the past, because each cage had a unique footprint, specific racks were used for each cage. Consequently, each size animal was housed in a specific sized cage, and a specific sized rack was designed to accommodate that cage. Therefore, according to the type of animal used in an experiment being performed, a certain sized cage and suitable rack were used. This increased the amount of precious laboratory space being consumed by the various racks, some of which were not even filled to capacity because the experiment did not require it. Prior to the introduction of the invention, laboratories commonly maintained a variety of cage and rack sizes. Accordingly, the new cages and racks were brought out of storage into the laboratory and the old cages and racks were put into storage for future use. However, if these new cages and racks were not in the laboratory's inventory, new cages and racks had to be purchased. Applicants realized that by providing a standardized cage and rack system, laboratories can save money and storage space. The invention of a specific footprint that meets ILAR standards and houses a variety of laboratory animals substantially eliminates the need for maintaining a wide variety of cages and racks suitable for housing them and therefore substantially reduces the storage space necessary for maintaining unused cages and racks.

Additionally, Applicants discovered that either by providing a cage that can be housed in a standardized rack or by providing a standardized cage and rack system suitable for housing a variety of sizes of animals, because all the racks can be the same size, the space in the laboratory can be used in a more efficient manner. For example, each rack is no longer dictated by the type of animal cage. Instead, a variety of animals can be housed in standardized cages in a standardized rack. This provides various benefits. For example, it can substantially eliminate empty spaces on racks, because the racks can be filled with a standardized cage constructed in accordance with the invention housing either animal(s) of the same size or animal(s) of different sizes, in contrast to leaving empty spaces on certain racks when there are not a sufficient number of animals of that particular size to fill the rack.

Additionally, the invention significantly simplifies the arrangement of racks in a laboratory room because it substantially eliminates the need to coordinate what dimensioned rack should be placed in what location and position, in order to maximize the number of racks that can be placed within a room. Because the size of the cages and racks remain constant, this calculation of how to maximize the use of the laboratory room needs to be performed just once. Furthermore, Applicants discovered that by providing a standardized cage that can be housed in a standardized rack, it facilitated planning the layout of laboratories because all the factors were known and common. Whether the experiment requires mice, rats, guinea pigs, etc., the number of cages and racks that can fit in a laboratory room is already known, and plans can be made accordingly, prior to placing the cages and racks in a laboratory room to determine how many test subjects can be placed in the same room. Accordingly, a laboratory can also choose to standardize their laboratory rooms to maintain even more consistency and predictability.

Similarly, the invention as set forth in independent claims 3, 8 and 9 presents a novel cage and rack system for housing a variety of animals by providing either a cage having a length of less than 18 inches or a rack having a depth containing cages having a length extending in or through the depth of the rack, wherein the measurement of the depth of the rack containing the cage(s), including the portions extending beyond the rack, is less than 36 inches. By providing a cage or rack system having the dimensions as claimed, a rack filled to its capacity with cages can easily be maneuvered in and out of laboratories or other facilities through standard size doors, which have a width of 36 inches. Commonly during experimentation on animals, it is necessary to move the caged animals between different rooms. For example, different parts of the experiment can be performed in different laboratory rooms. Accordingly, the invention facilitates transporting the animals and ensures that the laboratories need not be modified or built in a special way to accommodate the transport of the animals between facilities. Furthermore,

additional racks of cages can easily be brought into a laboratory without having the disassemble the cages and racks.

VII. THE ISSUES

1. Whether claims 1 and 2 are unpatentable under 35 U.S.C. 103(a) as being obvious over U.S. Patent. No. 4,989,545 to Scheaffer et al. (hereinafter "Scheaffer") in view of Applicants' admitted prior art (hereinafter "AAPA").

2. Whether claims 3 is unpatentable under 35 U.S.C. 103(a) as being obvious over Scheaffer in view of U.S. Patent No. 5,894,816 to Coiro et al. (hereinafter "Coiro").

3. Whether claim 8 is unpatentable under 35 U.S.C. 103(a) as being obvious over Scheaffer in view of Coiro.

4. Whether claim 9 is unpatentable under 35 U.S.C. 103(a) as being obvious over Scheaffer in view of Coiro.

VIII. GROUPING OF THE CLAIMS

Applicants respectfully submit that the Examiner's groupings of the claims for the purposes of the prior art rejections are improper. Applicants suggest that the claims should be grouped as follows.

Claims 1-2 stand and fall with the patentability of claim 1. Because the Examiner has appropriately grouped claims 1-2, no change in the grouping is required.

Claims 3, 8 and 9 should each be set forth in its own group, because they do not stand and fall with each other. The Examiner improperly grouped claims 3, 8 and 9 together. Whereas claim 3 sets forth that the length of the cage be less than substantially 18 inches, claim 8 further requires that the cage have a footprint that is between 80 and 110 square inches. Therefore, claim 8 possesses an additional claim element that is independent of claims 3 and 9, and

accordingly, is separately patentable. Claim 9 separately sets forth that a portion of the length of the cage extends beyond the rack, wherein the sum of the length of the portion and the length of the rack is less than or equal to substantially 36 inches, which is not disclosed in either 3 or 8, and therefore is separately patentable. Accordingly, each of the claims 3, 8 and 9 should be set forth in its own group.

IX. ARGUMENT

A. **REJECTION UNDER 35 U.S.C. § 103(A) - U.S. PATENT NO. 5,349,923 TO SHEAFFER ET AL. (SHEAFFER) IN COMBINATION WITH APPLICANT'S ADMITTED PRIOR ART (AAPA) OR U.S. PATENT NO. 5,894,816 TO COIRO (COIRO)**

The Examiner rejected claims 1 and 2 under 35 U.S.C. 103(a) as being unpatentable over Sheaffer in view of AAPA. In the Office Action, however, the Examiner conceded that Sheaffer does not disclose the limitation of "the floor of the cage bottom having a length l and a width w wherein $80 \text{ square inches} \leq l \times w \leq 110 \text{ square inches}$ " as is recited by claim 1 of the present application, nor the limitation of "the floor of the cage bottom having a length l and a width w wherein $l \times w$ is substantially 80 square inches" as recited by claim 2 of the present application. In an attempt to overcome these deficiencies, the Examiner relies on Applicants' specification, and more precisely, Applicants' discussion of prior art ventilated cage and rack systems. Specifically, the Examiner points to the specification of the present application, where Applicants discuss certain non-binding minimum dimensions of cages for particular rodents (e.g., mice and rats).

Based upon Applicants' discussion of prior art ventilated cage and rack systems, the Examiner takes the position that it would be obvious to modify Sheaffer to arrive at the invention claimed by claims 1 and 2 of the present invention.

The Examiner rejected claims 3 and 8 under 35 U.S.C. 103(a) as being unpatentable over Sheaffer in view of Coiro. However, the Examiner conceded in the Office Action that Sheaffer

does not disclose a cage having a length of substantially 18 inches. To attempt to cure this deficiency, the Examiner relies upon Coiro. With respect to claim 9, the Examiner, as in the rejection to claim 3, employs a hypothetical combination of Sheaffer and Coiro, but concedes that this hypothetical combination does not disclose a portion of the cage extending beyond the rack. The Examiner, however, characterizes this feature as being obvious, without setting forth any support for this characterization.

Applicants respectfully submit, however, that the invention claimed by claims 1 and 2 of the present application is not obvious in view of Sheaffer and AAPA, and that the invention claimed by claims 3, 8 and 9 is not obvious in view of a hypothetical combination of Sheaffer and Coiro.

1. The Examiner Has Failed To Present A *Prima Facie* Case Of Obviousness.

Pursuant to M.P.E.P. 2142, the Examiner bears the initial burden of establishing a *prima facie* case for obviousness. "If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness." M.P.E.P. 2142 (emphasis in original). Specifically, the MPEP sets forth the following criteria for the establishment of the *prima facie* case of obviousness:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

Id. (emphasis in original). Moreover, “[t]o support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections. The Examiner has failed to meet this burden on all accounts.

Sheaffer, either in view of AAPA or Coiro, fails to teach or suggest a cage suitable for housing multiple species of rodents, the cage having a footprint of between 80 and 110 square inches, as described in independent claims 1 and 8, or a cage and rack system wherein the cage has a length of less than substantially 18 inches, as described in independent claims 3 and 9. The references further fail to teach or suggest a cage having a length less than substantially 18 inches and either (a) a footprint between 80 and 110 square inches, as described in claim 8; or (b) a portion of the length of the cage that extends beyond the depth of the rack, wherein the combined measurement of the cage depth and length of the cage extending beyond the cage is less than substantially 36 inches, as described in claim 9.

The Examiner asserts, however, that “it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the floor of the cage of Sheaffer with the dimension range as listed above.” According to the Examiner, “since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges involves only routine skill in the art.” However, Applicants respectfully point out that there was neither “routine testing” nor “general experimental conditions” of using a single size, standardized cage for a variety of sizes of animals. The Examiner’s assertions may apply if Applicants claimed an optimum range of footprints for a cage suitable for housing only a single size of animals, for example, mice, rats, or guinea pigs, individually. This is because there

was a practice to house mice in a specific sized cage, and to determine the optimal the size of the cages being used for housing mice might be similar to “routine testing” or “general experimental conditions” as asserted by the Examiner. However, in contrast to the Examiner’s assertions, there was no practice of housing a variety of sizes of animals within a single size, standardized cage. Therefore, there was no “routine testing” or “general experimental conditions” of the cage for housing a variety of sizes of animals to determine the optimal size, as the Examiner claims. Accordingly, the Examiner has failed to demonstrate a prima facie finding of obviousness.

Furthermore, the Examiner has failed to demonstrate what reason a person skilled in the art would have for modifying Sheaffer with AAPA or Coiro to obtain the invention as claimed. As stated above and discussed in detail below, there was no recognition that a problem of inefficient use of laboratory space was present, or if a problem of inefficiency was recognized, there was no recognition that the inefficiency was a result of using different sized cages for different size animals. Instead, laboratories around the world used specific cages for specific size animals, as well as the complementing racks for those cages. No one recognized that the problem was the fact that different sized cages were used to house different size animals, and furthermore that different rack systems were used to accommodate the different sized cages. Accordingly, no one recognized that it was desirable to provide a standardized cage that meets ILAR standards that was suitable for housing a variety of sizes of animals. Therefore, persons of ordinary skill in the art had no reason to modify Sheaffer with AAPA, Coiro or any other reference to provide the invention as claimed. Furthermore, the combination of Sheaffer with AAPA or Coiro still fails to teach or suggest the dimensions claimed, and for the reasons stated above, persons of ordinary skill in the art had no reason to modify Sheaffer to provide the invention as claimed, with the specified dimensions.

As stated above, the Examiner merely makes the conclusory assertion that “it would have been obvious”. However, simply stating that “it would have been obvious” is insufficient, as the

Federal Circuit established. "Such generalized claims of what 'the secondary references' teach and of what the skilled artisan would have been 'well aware' fail to satisfy the level of specificity that is required." *In re Beasley*, 117 Fed. Appx. 739, 744 (Fed. Cir. 2004). The Examiner fails to demonstrate either an explicit or implicit motivation or suggestion to combine the references or to modify Sheaffer in any way to obtain the invention as claimed. If the prior art does not explicitly provide the motivation or suggestion to combine or modify, an implicit motivation or suggestion must be demonstrated, which can be found by determining what the combined teachings, knowledge of one skilled in the art, and the problem to be solved as a whole would have suggested to one of ordinary skill in the art. *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). "Broad conclusory statements standing alone are not 'evidence'." *Id.* Instead, the Federal Circuit stated that "[r]ather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." *Id.* at 1371. The Examiner fails to provide such "particular findings" regarding the reason to modify Sheaffer, as the Examiner asserts.

The M.P.E.P. supports Applicants' assertion. Section 2143.01 of the MPEP stresses the importance of providing evidence of implicit teaching, suggestion or motivation to combine or modify, and relies on *In re Kotzab* to help define what is (in)sufficient evidence:

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

...

In *In re Kotzab*, the claims were drawn to an injection molding method using a single temperature sensor to control a plurality of flow control valves. The primary reference disclosed a multizone device having multiple sensors, each of which controlled an associated flow control valve, and also taught that one system may be used to control a number of valves. The court found that there was insufficient evidence to show that one system was the same as one sensor. **While the control of multiple valves by a single sensor rather than by multiple sensors was a "technologically simple concept," there was no finding "as to the specific understanding or principle within the knowledge of the skilled artisan" that would have provided the motivation to use a single sensor as the system to control more than one valve.** 217 F.3d at 1371, 55 USPQ2d at 1318.

M.P.E.P. §2143.01 (emphasis added).

In *In re Kotzab*, the Federal Circuit found that there was insufficient evidence to prove a reason to modify the available prior art to obtain the invention as claimed, and therefore determined that the invention was novel and not rendered obvious. In *In re Kotzab*, it was known in the art to use multiple sensors to control multiple valves, wherein each sensor controlled one valve. The invention, in contrast, was directed to the use of a single sensor to control multiple valves. The reference further taught that one system may be used to control a plurality of valves, but the Federal Circuit determined that such a teaching did not render the invention obvious. These facts are very similar to this case. Prior to the invention, it was well known to use different sized cages for each size of animal. However, only the invention introduced the use of a single cage for housing a variety of sizes of animals. It is irrelevant that the Examiner may find this to be a "technologically simple concept". Accordingly, similar to the decision in *In re Kotzab*, there is no evidence "as to the specific understanding or principle within the knowledge of the skilled artisan" that would have provided the motivation to use a single cage to house more than one species/size animal. *Id.*

2. The Invention Was The Result of Applicants' Inventive Discovery of A Problem and The Source Thereof

The claimed invention was the result of Applicants' inventive discovery of a problem and the source thereof, which overcomes the finding of obviousness. For this reason, as set forth in detail below, and as supported by the Declarations filed concurrently herewith, Applicants respectfully traverse the rejection of claims 1, 2, 3, 8 and 9 under 35 U.S.C. § 103.

a. Discovering The Source Of A Problem Overcomes Obviousness Rejections

As is discussed below in detail, Applicants inventively discovered a problem, the source of that problem and the solution thereto. These discoveries are an inventive aspect of the invention claimed in the Application. Specifically, prior to the invention claimed in the Application, no one in the industry recognized that the fact that each of the available rack and cage systems were designed to efficiently house only a single species of animal within ILAR guidelines was a problem. There was no recognition of the problem of the inefficient use of lab space that was being caused by the size of animal cages, let alone any solution to that problem, in any prior art cited of record.

To overcome an obviousness rejection, an applicant may submit objective evidence that applicant discovered the source of a problem. "[A] patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the 'subject matter as a whole' which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103." *In re Spinnoble*, 405 F.2d 578, 585 (CCPA 1969); MPEP § 2141.02.

Applicants who allege they discovered the source of a problem must provide evidence substantiating the allegation, either by way of affidavits or declarations, or by way of a clear and persuasive assertion in the specification. *In re Wiseman*, 596 F.2d 1019 (CCPA 1979)¹; MPEP §

¹ In *In re Wiseman*, the claims at issue were directed to grooved carbon disc brakes wherein the grooves were provided to vent steam. The claims were rejected as obvious over a reference showing carbon disc brakes without grooves in combination with a reference showing grooves in noncarbon disc brakes for a different purpose.

2141.02. Accordingly, Applicants respectfully submit herewith the Declarations of Nick Guise and Neil Campbell to support Applicants' position that the present invention is neither obvious in view of the Office Action's proposed hypothetical combination of Sheaffer and AAPA, nor the Examiner's proposed hypothetical combination of Sheaffer and Coiro, because Applicants' claimed invention is the result of the inventive discovering of a problem that was not addressed or suggested by any of the prior art, and the source thereof.

In *In re Spinnoble*, the claim was directed to a plural compartment mixing vial wherein a center seal plug was placed between two compartments for temporarily isolating a liquid-containing compartment from a solids-containing compartment. The claim differed from the prior art in the selection of butyl rubber with a silicone coating as the plug material instead of natural rubber. The prior art recognized that leakage from the liquid to the solids compartment was a problem, and considered the problem to be a result of moisture passing around the center plug because of microscopic fissures inherently present in molded or blown glass. According to Federal Circuit, the inventor discovered that the source of the problem, more specifically, the cause of moisture transmission, was through the center plug, and that there was no teaching in the prior art which would suggest the necessity of selecting applicant's plug material which was more impervious to liquids than the natural rubber plug of the prior art. 405 F.2d at 585; MPEP § 2141.02. Accordingly, the Federal Circuit decided that the invention was novel notwithstanding the fact that each element was known in the art.

The Federal Circuit affirmed the rejection, holding that even if applicants discovered the cause of a problem, the solution would have been obvious from the prior art which contained the same solution for a similar problem. MPEP § 2141.02.

In stark contrast to the facts in *In re Wiseman*, however, Applicants' claimed invention resulted from discovering that a problem existed and the source of that problem, and furthermore provides a solution to that problem, which was not recognized or addressed in the prior art. In fact, the prior art did not even recognize a similar problem, unlike the situation in *In re Wiseman*. Finally, unlike the facts in *In re Wiseman*, even if the references cited by the Examiner are combined, they still fail to teach or suggest the structure set forth in claims 1-3, 8 and 9.

Similarly, as further described below, and as supported by the Declarations submitted concurrently herewith, Applicants inventively discovered a problem and the source of that problem. Prior to the conception of the claimed invention, each cage and rack system sold in the market was designed and dimensioned specifically to meet Institute for Laboratory Animal Research (ILAR) guidelines for a specific animal species. For example, because each cage and rack system was built around the size of the cage, each of the different rodent cages and systems had different cage and rack footprints for different rodent types. Thus, a mice-only cage and system took up a different amount of laboratory and inventory space than a rat-only cage and rack system. Consequently, efficient use of valuable laboratory and inventory space was ignored because the type of rodent being studied (and thus the size of the cage and system used) would be subject to change, based on the type of rodent that would be used by a particular study.

Prior to the invention claimed in the application, there was no recognition that the use of lab space was inefficient or in any way related to the size of the animal cages. No thought was given to the fact that the cause of these inventory and size problems was a result of the size and the complexity of each of the different rack and cage systems.

First, Applicants recognized that there was a problem. Next, Applicants discovered that the cause of the problem was not that a particular cage and rack system for a specific animal species should be made to have a smaller footprint. In contrast, Applicants discovered that the cause of the problem was that each of the available systems was designed to efficiently house only a single species of animal within ILAR guidelines.

Applicants' conception recognized that the solution to the problem was to provide a cage and rack system that was capable of efficiently housing more than one species of animal, while simultaneously meeting the ILAR requirements for housing each of those animal species. In other words, the solution to the problem was to invent a cage and rack system with respect to the overall efficiency of housing multiple species, instead of just the efficiency of housing one

specific species. Accordingly, by simultaneously looking at the combined efficiency of housing multiple species of animals, Applicants were able to invent a cage and rack system that solved the inventory and planning problems.

(1) There Was No Prior Recognition of the Problem

As background, and as described in the Declaration of Neil Campbell, one of the co-inventors of the claimed invention, the Institute for Laboratory Animal Research (ILAR) publishes requirements for cage size corresponding to each animal size and/or species. These guidelines are meant to provide information so that different species of animals may be properly housed during laboratory experiments. For example, for mice that weigh more than 25 grams, a cage having a floor dimension of at least 15 square inches per mouse is required. Similarly, rats up to 400 grams in size require a cage floor dimension of at least 40 square inches per rat. For hamsters that weigh more than 100 grams, a cage floor dimension of at least 19 square inches per hamster is required.

Applicants respectfully maintain that Neil Campbell is a person of knowledge and experience in the relevant art. In his Declaration, Neil Campbell discusses the fact that he and his co-inventors discovered that a problem existed, and that the discovery of that problem was an inventive aspect of the invention claimed in the Application. Specifically, prior to the invention claimed in the Application, no one in the industry recognized that the fact that all of the available rack and cage systems were designed to efficiently house only a single species of animal within ILAR guidelines was a problem. Mr. Campbell and his co-inventors recognized that there was a problem and that the solution to the problem was to provide a cage and rack system that was capable of efficiently housing more than one species of animal, while simultaneously meeting the ILAR requirements for housing each of those animal species. Thus, the Campbell Declaration establishes the fact that in the prior art, there was no recognition of the problem of

the inefficient use of lab space that was being caused by the size of animal cages, let alone any solution to that problem.

(2) Applicants Discovered A Problem, The Source Thereof and The Solution

Applicants discovered that the cause of the problem of inefficient use of laboratory space was not that the available cage and rack systems for specific animal species had too large a footprint. In contrast, Applicants discovered that because each of the available systems was designed to efficiently house only a single species of animal within ILAR guidelines, the problem existed.

Applicants recognized that the solution to the problem was to provide a cage and rack system that is capable of efficiently housing more than one species of animal, while simultaneously meeting the ILAR requirements for housing each of those animal species. In other words, the solution to the problem was to invent a cage and rack system with respect to the overall efficiency of housing multiple species/sizes of animals, instead of just the efficiency of housing one specific species/sizes of animals.

By simultaneously looking at the combined efficiency of housing multiple species of animals, Applicants were able to design a cage and rack system that solved the inventory and planning problems discussed above.

An important feature of the claimed invention is that overall dimensions of the cage must be designed to simultaneously meet ILAR guidelines for more than one animal species.

Because there is a need by laboratories to move the rack and cage systems from room to room, there is also a need to design the rack and cage systems so that they may pass through a standard doorway (having a height of 6'8" and a width of 36"), while simultaneously meeting the ILAR guidelines.

The result of this inventive idea is embodied in a cage having a floor with a footprint of 80 square inches and a rack with a depth that is less than or equal to 36 inches including the

cages housed thereon, and that could house any of a plurality of rodent types (e.g., rats, mice, hamsters and guinea pigs) while simultaneously meeting ILAR guidelines for each of those species.

An embodiment of the invention, as claimed, for example, by claim 1 of the Application, is directed to a multipurpose cage level barrier rodent cage for housing multiple species of rodents, including a plurality of mice or rats in a ventilated rack and cage system, the cage comprising a cage bottom having a plurality of integral side walls, a floor and an open top end, the floor having a length l and a width w wherein $80 \text{ square inches} \leq l \times w \leq 110 \text{ square inches}$. Claim 2 recites a similar limitation, wherein $l \times w$ is equal to substantially 80 inches

An embodiment of the invention is also claimed, for example, by claim 3 of the Application, which recites a cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising a double sided rack, the rack having a depth; at least one cage disposed in the rack, the cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially a 18 inches.

Similarly, claim 8 is directed to a cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising: a double sided rack, the rack having a depth; and a cage disposed in the rack, the cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially a 18 inches; wherein the cage bottom has a length l and a width w , and wherein $80 \text{ square inches} \leq l \times w \leq 110 \text{ square inches}$.

Likewise, an embodiment of the invention is claimed by claim 9 of the Application, which is directed to a cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system

comprising: a double sided rack, the rack having a depth; and a cage disposed in the rack, the cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially a 18 inches; wherein the rack has a depth and the cage rests within said rack so that the length of the cage at least partially overlaps the depth of the rack and a portion of the cage extends beyond the rack, the portion having a length and the sum of the length of the portion and the depth of the rack is less than or equal to substantially 36 inches.

Applicants discovered that a problem existed, and the source of the problem, and it is apparent that the discovery of that problem and the source thereof was an inventive aspect of the invention claimed in claims 1-3, 8 and 9 in the Application. 405 F.2d at 585.

(3) Objective Evidence Of Discovering A Problem And The Source Thereof

Applicants have also submitted, concurrently herewith, and in further support of Applicants' contention of discovering a problem and the source thereof, the Declaration of Nick Guise. As stated in his Declaration, Mr. Guise has no financial interest in Lab Products, Inc., assignee of the present application (LPI). See Guise Declaration, paragraph 1. When in his previous position, the facilities where Mr. Guise was employed used equipment from a variety of suppliers, one of those suppliers being LPI. LPI equipment, however, was by no means favored or preferred at those facilities. Accordingly, prior to beginning his present position, Mr. Guise was not a loyal LPI customer of rodent cages and systems, but instead, a purchaser of equipment from various suppliers. See Guise Declaration, paragraph 5. Accordingly, Mr. Guise is an objective source of information regarding the present application.

As stated in his Declaration, upon seeing the One Cage™ system from LPI around the Fall of 1999, Mr. Guise realized that LPI had solved a problem not previously addressed by cage manufacturers. With floor space and storage being at a premium, prior to the One Cage™ system, suppliers had limited their improvements of cage systems to meet ILAR standards for

each individual type of rodent size and/or species. Thus, manufacturers provide specialized rodent cage and rack systems, each dimensioned and configured for a specific rodent type and/or size. See Guise Declaration, paragraph 7.

Accordingly, Mr. Guise has recognized that Applicants inventively discovered a problem that had not previously been addressed in the prior art. Furthermore, Mr. Guise also recognizes that Applicants discovered the cause of that problem, and the solution thereto.

According to Mr. Guise, LPI's One Cage™ System met Mr. Guise's Company's rodent caging system needs exceedingly well and enabled his company to accommodate different rodent species (i.e., sizes) with the benefit of reducing inventory of cage types as well as standardizing the size of each lab space due to the design and dimension of the One Cage™ System. Consequently, Mr. Guise's Company's efficiency and laboratory and storage space utilization was enhanced. See Guise Declaration, paragraph 10.

Since LPI's introduction of its One Cage™ System, Mr. Guise has not found any other cage level barrier rodent cage system that can accommodate a plurality of different rodent types, while meeting ILAR requirements for each rodent type, as can the One Cage™ System. See Guise Declaration, paragraph 12.

Accordingly, for the reasons stated above, and as stated in the Declaration of Nick Guise, Applicants respectfully submit that Applicants discovered that a problem existed, and the source of the problem, and it is apparent that the discovery of that problem and the source thereof was an inventive aspect of the invention claimed in the Application. 405 F.2d at 585. Accordingly, Applicants submit that claims 1, 2, 3, 8 and 9 are patentable over the cited prior art and respectfully request that the rejections to those claims under 35 U.S.C. § 103 be withdrawn.

3. Evidence Of Commercial Success Overcomes Obviousness

In addition to the arguments set forth above with respect to the inventive discovering of a problem and the solution thereof, Applicants respectfully submit that certain products

manufactured and sold by Lab Products, Inc (LPI), and covered by claims 1, 2, 3, 8 and 9 of the present application, achieved immediate commercial success. For this reason, and as set forth in detail below and as supported by the Declarations filed concurrently herewith, Applicants further respectfully assert that the invention was not obvious.

To overcome an obviousness rejection, an applicant may submit objective evidence of commercial success. See, e.g., *In re Ben Huang*, 100 F.3d 135, 139(Fed. Cir. 1996), citing *Graham v. John Deere Co.*, 338 U.S. at 17-18 (1966); and MPEP §716.03 and §716.04. Applicants respectfully submit herewith the above-discussed and previously submitted Declarations of Nick Guise, Neil Campbell, Betty Fatzie and Dietrich Crase, to support Applicants' position that the present invention is not obvious over the Examiner's proposed hypothetical combination of Sheaffer and AAPA, nor the Examiner's proposed hypothetical combination of Sheaffer and Coiro.

An applicant who is asserting commercial success to support its contention of nonobviousness bears the burden of proof of establishing a nexus between the claimed invention and evidence of commercial success. The term "nexus" designates a factually and legally sufficient connection between the evidence of commercial success and the claimed invention so that the evidence is of probative value in the determination of nonobviousness. See e.g., MPEP §716.03 and *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387 (Fed. Cir. 1988). Applicants respectfully submit that such a factually and legally sufficient connection exists with regard to cage level barrier rodent cages and systems sold by LPI under the brand name One Cage™ System, and covered by claims 1, 2, 3, 8 and 9 of the present application. Applicants further respectfully submit that such a nexus is clearly demonstrated by the Declarations of Nick Guise, Neil Campbell, Betty Fatzie and Dietrich Crase, submitted concurrently herewith.

With respect to claims 1, 2 and 8 of the present application, in Ms. Fatzie's Declaration, as noted in paragraph 9 thereof, when LPI began selling its One Cage™ System in 1999, LPI

was then selling a variety of cage level barrier rodent cages and systems; each such cage and system being intended for use with a single, specific rodent type, and each such cage being sized to house a single specific rodent type or a plurality of that specific rodent type, and to meet ILAR standards. Thus, in 1999, a LPI customer could purchase from LPI (and ostensibly from other suppliers) a variety of different cage level barrier rodent cages and systems. Despite that fact, sales of LPI's One Cage™ System for the first three years following its introduction (1999-2001) amounted to about \$9,430,000, averaging over 3 million dollars per year. The sales of the One Cage™ System accounted for 24% of LPI's gross sales for all its cage level barrier rodent cages and systems for that time period.

Applicants submit that one reason for the immediate commercial success of LPI's One Cage™ System is the fact that the novel and nonobvious dimensions of the cage level barrier rodent cage (as recited by claims 1, 2 and 8) substantially eliminates the need for a laboratory to purchase and inventory a plurality of cage and rack sizes for distinct types (species) of rodents. That fact results in significant cost savings. See, e.g., Fatzie Declaration, paragraph 12. Applicants further respectfully submit that another reason for the immediate commercial success of LPI's One Cage™ System is that a cage level barrier rodent cage covered by claims 1, 2 and/or 8 (as is LPI's One Cage™ System) provides customers with the ability to standardize the size of their cage level barrier rodent cages and systems. See, e.g., Fatzie Declaration, paragraph 13. Finally, Applicants respectfully submit that still another reason for the immediate commercial success of LPI's One Cage™ System is that a cage level barrier rodent cage covered by claim 1, 2 and/or 8 (as is LPI's One Cage™ System) eliminates the inefficiency that occurs during cleaning, sorting and delivering the various different size and shape cage level barrier rodent cages when transitioning from one study to the next, or in the ordinary course of cleaning the cages during a particular study. See, e.g., Fatzie Declaration, paragraph 14.

With regard to Mr. Crase's Declaration, Applicants respectfully submit that paragraph 8 thereof clearly supports Applicants' claim of commercial success and further provides the necessary legal and factual nexus between the claimed invention and the commercial success. In that paragraph, Mr. Crase states that the "benefits recognized by Advanced Medicine...are due to the...unique size and proportion [of LPI's One Cage™ System], specifically, to the fact that the cage level barrier rodent cage of the One Cage™ System has a floor with a footprint with an area of 80 square inches."

With regard to Mr. Guise's Declaration, Applicants respectfully submit that paragraphs 7-14 thereof, clearly support Applicants' claim of commercial success and further provide the necessary legal and factual nexus between the claimed invention and the commercial success. In those paragraphs, Mr. Guise states that Mr. Guise's employer, Wyeth Research, purchased "forty-three (43) One Cage™ rack and cage systems on October 13, 2000, and thirty-six (36) One Cage™ rack and cage systems on October 25, 2000." See Guise Declaration, paragraph 8.

In his Declaration, Mr. Guise states that "LPI's One Cage™ System met Wyeth Research's rodent caging system needs exceedingly well and enabled Wyeth Research to accommodate different rodent species (i.e., sizes) with the benefit of reducing inventory of cage types," and that "Wyeth has also been able to standardize the size of each lab space due to the design and dimension of the One Cage™ System." See Guise Declaration, paragraph 9.

Mr. Guise also states in his Declaration that "[s]ince LPI's introduction of its One Cage™ System, Wyeth Research has not found any other cage level barrier rodent cage system that can accommodate a plurality of different rodent types, while meeting ILAR requirements for each rodent type, as can the One Cage™ System." See Guise Declaration, paragraph 12.

Mr. Guise, in his Declaration, further states that "Wyeth Research selected and continues to purchase LPI's One Cage™ System" because "the cost savings [Wyeth realizes] by not having to purchase and inventory different cage level barrier rodent cages and systems for [Wyeth's]

different rodent type needs” (see Guise Declaration, paragraph 13), and also that Wyeth has been able to “significantly improve and standardize [Wyeth’s] use of laboratory and inventory space as a result of the standardized cage and rack footprint provided by the One Cage™ System,” and that “the One Cage™ System is a significant improvement over other commercially available cage level barrier rodent cages and systems because it results in a more efficient use of valuable laboratory space and has simplified facilities planning and design.” See Guise Declaration, paragraph 14.

It is important to note that Mr. Guise is not tied to LPI in any manner. Furthermore, it is also important to note that prior to the purchase of the above-mentioned One Cage™ System units by Wyeth, Mr. Guise was not a regular customer of LPI, and could not be characterized as a long term customer of, nor as being normally tied to, LPI.

Mr. Campbell is the President of LPI, and his Declaration complements the Declaration of Mr. Guise, describing specifically how the features attributed by Mr. Guise as leading to the commercial success of the One Cage™ System directly relate to the claims, and to the fact that the cage level barrier rodent cage of the One Cage™ System has a floor with a footprint with an area of 80 square inches as claimed in the application.

Specifically, in his Declaration, Mr. Campbell states that by simultaneously looking at the combined efficiency of housing multiple species of animals, [Mr. Campbell and his co-inventors] were able to design a cage and rack system that solved the inventory and planning problems” discussed in the Declaration of Mr. Guise. See Campbell Declaration, paragraph 19. Similarly, Mr. Campbell further states that he and his co-inventors “recognized that the overall dimensions of the cage must be designed to simultaneously meet ILAR guidelines for more than one animal species.” See Campbell Declaration, paragraph 20. Mr. Campbell and his co-inventors “recognized that there is a need of laboratories to move the rack and cage systems from room to room, and have a rack and cage system that can easily pass through a standard doorway

(having a height of 6'8" and a width of 36"), while simultaneously meeting the ILAR guidelines." See Campbell Declaration, paragraph 21.

Mr. Campbell further describes that the "result of this inventive idea is embodied in a cage having a floor with a footprint of 80 square inches and a rack with a depth that is less than or equal to 36 inches, and that could house any of a plurality of rodent types (e.g., rats, mice, hamsters and guinea pigs)." See Campbell Declaration, paragraph 22. Mr. Campbell states that these features are recited by claims 1, 2 and 8 of the present Application. See Campbell Declaration, paragraphs 23-25.

Accordingly, Applicants respectfully submit that the Fatzie, Crase, Campbell and Guise Declarations, taken together, provide the necessary legal and factual nexus between the claimed invention (as recited by claims 1, 2 and 8) and the commercial success of LPI's One Cage™ System which, as stated above, is covered by claims 1, 2 and 8 of the present application.

Evidence of nonobviousness including commercial success, such as that provided by Applicants by way of the Fatzie, Crase, Campbell and Guise Declarations, must be commensurate in scope with the claims. See, e.g., MPEP §716.03 and *In re Tiffin*, 448 F.2d 791, 171 USPQ 294 (CCPA 1971). In order to be commensurate in scope with the claims, the commercial success must be due to claimed features, and not due to unclaimed features. See, e.g., MPEP §716.03 and *Joy Technologies Inc. v. Manbeck*, 751 F. Supp. 225, 229 (D.D.C. 1990), *aff'd*, 959 F.2d 226, 228 (Fed. Cir. 1992). Once again, Applicants respectfully submit that the Fatzie, Crase, Campbell and Guise Declarations establish that the commercial success experienced by LPI with its One Cage™ System was due to the novel and unobvious dimensions of the cage level barrier rodent cage (as recited by claims 1, 2 and 8). See, e.g., Fatzie Declaration, paragraphs 3 and 9-14; Crase Declaration, paragraphs 6-8; Guise Declaration, paragraphs 9 and 12-14; and Campbell Declaration, paragraphs 19-21 and 23-25.

Applicants respectfully submit that the commercial success of LPI's One Cage™ System was due to the novel and unobvious dimensions of the cage level barrier rodent cage provided as part of that system; those dimensions being recited in claims 1, 2 and 8. Applicants further respectfully submit that the Declarations of Betty Fatzie, Dietrich Crase, Neil Campbell and Nick Guise support Applicants' position, and provide sufficient legal and factual nexus between the commercial success and the invention recited by claims 1, 2 and 8.

Regarding the rejections of claims 3 and 9 under 35 U.S.C. §103 as being unpatentable over Sheaffer in view of U.S. Patent No. 5,894,816 to Coiro, Sr. et. al. (Coiro), the Fatzie, Crase, Campbell and Guise Declarations again provide evidence of the commercial success of LPI's One Cage™ System, which is covered by claims 3 and 9. Applicants submit that the commercial success of LPI's One Cage™ System is again due to the novel and unobvious dimensions of the cage, as recited by claims 3 and 9. By providing a cage having a length that is substantially less than 18 inches, as recited by claim 3, or a rack and cage system having a depth that is less than or equal to substantially 36 inches, as recited by claim 9, LPI's One Cage™ System provides a cage level barrier ventilated rack and cage system for housing a plurality of types of rodents with a standardized footprint. For example, the 18 inch footprint defined by the length of the cage, and the 36 inch footprint defined by the cage and rack system enables LPI's One Cage™ System to fit through a standard commercial doorway. See, e.g., Fatzie Declaration, paragraph 4; and Campbell Declaration, paragraph 21. That simplifies facilities planning and design because a single doorway size will accommodate the cage level barrier ventilated rack and cage systems for a plurality of different rodent types (using LPI's One Cage™ System). See, e.g., Fatzie Declaration, paragraph 13; Crase Declaration, paragraph 11; and Campbell Declaration, paragraph 22. As discussed above, a standardized footprint also enables more efficient use of laboratory space. See, e.g., Fatzie Declaration, paragraph 13; Crase Declaration, paragraph 11; Guise Declaration, paragraph 14; and Campbell Declaration, paragraph 18.

Accordingly, Applicants respectfully submit that the novel features recited by claims 3 and 9 have directly contributed to the commercial success of LPI's One Cage™ System. In addition, Applicants submit that the Declarations submitted herewith in support of Applicants' position regarding the commercial success of LPI's One Cage™ System overcome the obviousness rejection of claims 3 and 9.

4. There is a Lack Of Motivation To Combine Sheaffer with Coiro; and Coiro Teaches Away from the Invention

With respect to the rejections to claims 3, 8 and 9, Applicants also take this opportunity to address the deficiencies of the hypothetical Coiro--Sheaffer combination of prior art reference set forth in the Office Action. First, as discussed above, the Examiner failed to demonstrate that one skilled in the art had a reason to combine the references. Furthermore, the proposed hypothetical combination is inconsistent with the Federal Circuit's admonition that in evaluating obviousness it is not proper to use the Applicants' disclosure as a template upon which the prior art is grafted. *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999). The justification stated in the Office Action does not constitute the "showing of the teaching or motivation to combine prior art references" required by the Court in *In re Dembiczak*. In that case the Federal Circuit states that "the showing must be clear and particular", and that "[b]road conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'"

Specifically, with respect to claims 3, 8 and 9, the Office Action does not address why one skilled in the art would look to combine the cage of Coiro with the rack system of Sheaffer, as the two references disclose very different systems. As discussed above, prior art rack and cage systems, such as that disclosed in Coiro and Sheaffer, do not recognize or address the problem having different cage systems for different animal species, or of providing the solutions described herein. Accordingly, because neither Coiro nor Sheaffer recognize or discuss the problems discussed above with rack and cage systems each being designed for a specific animal

species and/or size, neither reference provides a motivation, either explicit or implicit, to combine the cage of Coiro with the rack of Sheaffer. Furthermore, because Sheaffer describes a cage having a specific mounting and coupling mechanism to position it within the rack (see, e.g., Sheaffer at FIG. 4), there is no indication in Coiro that the rack of Coiro would be the type that would even work within the cage of Sheaffer, providing further evidence of no disclosure of motivation to combine the references.

Moreover, with respect to claim 8 of the present application, not only do neither of the references provide any motivation for combining the references, but Coiro's specific disclosure of a preference of a 75 square inch cage area (see Coiro at col. 5, lines 63), as discussed in the Office Action, is actually in stark contrast to, and teaches away from, a cage wherein the cage bottom "has a length l and a width w, and wherein 80 square inches $\leq l \times w \leq 110$ square inches" as is claimed by claim 8 of the present application.

Accordingly, with regard to claims 3, 8 and 9, Applicants respectfully traverse these rejections because there is no teaching or suggestion in the references to make the hypothetical combination proposed in the Office Action, and thus the combination is improper. *Id.*

X. CONCLUSION

Applicants respectfully submit that (1) the Examiner failed to provide a prima facie case of obviousness by failing to demonstrate that persons of ordinary skill in the art prior to the invention had a reason to modify Sheaffer to obtain the invention as claimed; (2) there was no motivation to combine Sheaffer with AAPA or Coiro to obtain the invention as claimed; (3) Applicants have discovered that a problem existed and also discovered the source of that problem, and that those inventive discoveries resulted in the claimed invention of the present application; and (4) the invention has achieved significant commercial success; all of which overcomes the Examiner's obviousness rejections. Furthermore, by Declarations submitted

concurrently herewith, Applicants have provided evidence in support of their claim of discovering the source of a problem. Similarly, Applicants have provided significant evidence of commercial success linked directly to the claimed features of the invention. Finally, Applicants have demonstrated that none of the cited prior art references contain a recognition of the problem discovered by Applicants, let alone the same solution for a similar problem to the source of the problem discovered by Applicants. For each of these reasons, Applicants respectfully maintain that the invention as claimed is patentable.

Applicants have made a diligent effort to place the Application in condition for allowance and respectfully submits that claims 1-3, 8 and 9 in light of the arguments set forth above are in condition for immediate allowance. Accordingly, Applicants respectfully request that the Examiner's rejections be reversed and the claims allowed to issuance.

Applicants authorize the Commissioner to charge any new and additional fees or charges, including any fees for a petition for an extension of time, to Deposit Account No. 19-4709, if necessary.

Respectfully submitted,

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XI. **APPENDIX**

Listing Of Claims

1. A multipurpose cage level barrier rodent cage for housing multiple species of rodents, including a plurality of mice or rats in a ventilated rack and cage system, the cage comprising a cage bottom having a plurality of integral side walls, a floor and an open top end, said floor having a length l and a width w wherein

$80 \text{ square inches} \leq l \times w \leq 110 \text{ square inches}$.

2. The multipurpose rat cage of claim 1, wherein $l \times w$ is substantially 80 square inches.

3. A cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising a double sided rack, the rack having a depth;

at least one cage disposed in said rack, said cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially 18 inches.

Claims 4-7 (Cancelled)

8. A cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising:

a double sided rack, the rack having a depth; and

a cage disposed in said rack, said cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially 18 inches;

wherein said cage bottom has a length l and a width w , and wherein $80 \text{ square inches} \leq l \times w \leq 110 \text{ square inches}$.

9. A cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising:

a double sided rack, the rack having a depth; and

a cage disposed in said rack, said cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially 18 inches;

wherein said rack has a depth and said cage rests within said rack so that said length of said cage at least partially overlaps said depth of said rack and a portion of said cage extends beyond said rack, the portion having a length and the sum of the length of the portion and the depth of said rack is less than or equal to substantially 36 inches.